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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Atsushi Ishikawa

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EXAMINER

NGUYEN, DONGHAI D

ART UNIT

PAPER NUMBER

3729

MAIL DATE

DELIVERY MODE

09/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/532,949	<b>Applicant(s)</b> ISHIKAWA ET AL.	
	<b>Examiner</b> DONGHAI D. NGUYEN	<b>Art Unit</b> 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 8-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 16-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Amendment***

1. The proposed reply filed on June 1, 2009 has been considered and entered. Claims 1-19 are currently pending, and claims 8-15 are withdrawn from further consideration.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 6-7 as best understood are rejected under 35 U.S.C. 102(b) as being anticipated by JP Patent 07-099,379 to Suga et al.

Regarding claim 1, Suga et al disclose a holding and conveyance jig (2) for detachably holding and conveying a printed circuit board (1) or a conductive material laminated plate (4) for manufacturing said printed circuit board (1), said jig comprising: a plate (5) having has a weak-adherence adhesive pattern (6) on a surface of the plate; wherein: said printed circuit board has a conductive portion (4) and a non-conductive portion on a surface of the printed circuit board (see Fig. 1c) and said printed circuit board or said conductive material laminated plate being is placed and held on the surface of said plate, and said weak-adherence adhesive pattern is formed at a position corresponding to said non-conductive portion (see Figs. 1c and 1d).

Regarding claims 6 and 7, Suga et al disclose method of conveying a printed circuit board on which electronic components are mounted thereon, having a conductive portion and a non-

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conductive portion on a surface of the printed circuit board while detachably holding said printed circuit board on a holding and conveyance jig in which a weak-adherence adhesive pattern is provided on a surface of the jig, the method comprising the step of: holding said printed circuit board (1) on the surface of said holding and conveyance jig (5) in a manner such that said non-conductive portion is placed by being restricted to a surface of said weak-adherence adhesive pattern (6, see Figs. 1c and 1d) or holding said electroconductive material laminated plate (4) on the surface of said holding and conveyance jig (5) in a manner such that a portion intended for formation of said non-conductive portion is placed by being restricted to a surface of said weak-adherence adhesive pattern (6 see Figs. 1c and 1d).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 5 and 16 as best understood are under 35 U.S.C. 103(a) as obvious over Suga et al in view of US Patent 6,063,647 to Chen et al and vice versa.

Regarding claim 2, Suga et al disclose a holding and conveyance jig (5) for detachably holding and conveying a printed circuit board (1) or a conductive material laminated plate (4) for manufacturing said printed circuit board (1) for comprising: a plate which has a weak-adherence adhesive pattern (6) on a surface of the plate; wherein the printed circuit board (1) has a conductive portion (4) and a non-conductive portion on a surface of the printed circuit board (see

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Fig. 1c), and said printed circuit board (1) or said conductive material laminated plate (4) being placed and held on the surface of said plate (5, see Fig. 1c) and a weak-adherence adhesive pattern (6 see Fig. 2 is formed on a surface of said weak-adherence adhesive layer at a position corresponding to said conductive portion (see Figs. 1c-d). Suga et al do not disclose a weak-adherence adhesive pattern (6) subjected to surface roughening (see Fig. 1b or 4b-c) is formed on a surface of said weak-adherence adhesive layer at a position corresponding to said conductive portion (see Figs. 1d and 5e). Chen et al teach the adhesive subjected to surface roughening (see Figs. 1b, 4b-4c) for facilitating the mechanical connection between the jig and the printed circuit board. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Suga et al by utilized roughening adhesive patent as taught by Chen for facilitating the mechanical connection between the jig and the printed circuit board.

Regarding claims 3, 5 and 16, Chen et al also teach the adhesive pattern has a plurality of thickness regions differing in thickness from the surface of said plate (see Fig. 5d) and a non-adhesive pattern is formed at a position corresponding to said conductive portion on the surface of said weak-adherence adhesive layer (see Fig. 1d) for the reason provided above.

6. Claims 4 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suga et al or Suga in view of Chen et al as applied above further in view of US Patent 5,352,314 to Coplan.

Suga/Chen et al do not disclose a plurality of adhesive strength regions differing in adhesive strength. Coplan teaches the adhesive strength between layers can be controlled

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(different) for properly holding the layers (see Col. 4, lines 53-64). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Suga/Chen et al by utilized the weak-adherence adhesive patent having plurality of adhesive strength regions differing in adhesive strength as taught by Coplan for properly holding the substrate and jig together.

### ***Response to Arguments***

7. Applicant's arguments filed on May 29, 2009 have been fully considered but they are not persuasive. Applicants argue that "Suga et al. do not disclosed a distinctive feature relating to the positional correspondence relationship between the weak-adherence adhesive pattern and the non- conductive portions of the relevant printed circuit board" (see "Remarks" page 13, 3rd paragraph). The Examiner disagrees because the present claim invention claims "the printed circuit board or said conductive material laminated plate is placed and held on the surface of said plate" (in alternative form) and does not exclusively claim the circuit board is placed and held on the surface of said plate such that said weak-adherence adhesive pattern is formed at a position corresponding to said non-conductive portion.

Applicants also argue that "the adhesive of the Suga et al. reference is non "weak-adherence" when it is first coated, and is converted to a "weak-adherence" adhesive by performing ultraviolet curing after the exposure process" (see "Remarks" bridged paragraph between page 13 and 14). The Examiner disagrees because it must be noted that Suga et al disclose the invention as claimed (i.e. the adhesive is converted to a "weak-adherence" adhesive).

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The fact that it discloses the adhesive is none "weak-adherence" when it is first coated not claimed is irrelevant.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DONGHAI D. NGUYEN whose telephone number is (571)272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris H. Banks can be reached on (571)-272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN  
August 31, 2009

/Donghai D. Nguyen/  
Primary Examiner, Art Unit 3729